New Hampshire
Department of Agriculture, Markets & Food

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Asian Longhorned Beetle Invasion in New England

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Among the other negative economic news stories of 2008 is the first invasion of the Asian longhorned beetle in New England. How bad is it? Well, I have been doing insect pest detection work for about 25 years, and this is the biggest pest infestation of my entomological career; and it may be the biggest pest in New England history ever!

The Asian longhorned beetle is a pest both here in the US and in its home country of China. This beetle is a serious threat to most of our native hardwood trees, including maple (red, sugar, silver, sycamore, Norway, and boxelder), birch, poplar, elm, ash, horsechestnut, locust, willow, and more. Unlike most of our native longhorned beetles, the Asian longhorned beetle attacks live trees and has no natural enemies in the US that are known to keep its population in check. It has the potential of damaging industries such as lumber, furniture, maple syrup, nursery, and tourism. If Asian longhorned beetle becomes established in our nation's hardwood forests, it has the potential of causing more damage than Gypsy moth, Dutch elm disease, and Chestnut blight combined!

In North America the Asian longhorned beetle was first detected in New York City in 1996, and then followed by new infestations around Chicago in 1998, Newark in 2002, and Toronto in 2003. Government efforts the US and Canada have been greatly successful in eradicating/controlling these infestations. One important factor in their favor was that all of these infestations occurred within major metropolitan areas that where well isolated from native forests. However, the most recent invasion of Asian longhorned beetle, currently covering a 70 square mile in Worcester, Massachusetts, is most worrisome, because this is the first North American infestation that is adjacent to a major hardwood forest, and in this case the beetle could easily disperse and become permanently established in the Northeast.

The beetle's life cycle starts with the female beetles laying eggs in the summer (each female laying 35 to 90 eggs). Each egg is inserted into a separate oviposition site that the female makes by chewing a small depression in the bark. After hatching, the beetle larvae (white grubs) tunnel into the wood just below the cambium where they feed for several weeks and then enter the more solid woody tissue (xylem) where they develop over the winter. In the spring the grubs turn into pupae, and then in the summer, adults. The adults chew their way out of the tree, emerging from exit holes which are nearly perfectly round and slightly less that half an inch in diameter. The adult beetle is large, about 1 to 1.5 inches long (not including antennae which are longer); its coloration is almost black with a steel-blue, metallic sheen, and white spots; and its antennae are banded with several white and black bands.

Unfortunately a few of our native insects (which are of little concern) are often mistaken by the public to be the Asian longhorned beetles. People should be on the lookout for infested trees in decline that have numerous round exit holes. This damage is unmistakable. A single infested tree can be riddled with hundreds or thousands of exit holes (on very large trees, most exit holes will be present on the upper branches). If you see trees damaged like this, please contact our office, or another government forest or plant health official, immediately!

For more information on Asian longhorned beetle, including photos, visit the USDA's web site at www.aphis.usda.gov. Under Hot Issues, click on the Asian longhorned beetle.

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